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blocks can be modified in multiple ways within a cell. Nonetheless, the sequence of the amino acids is the primary contributor to the function of the protein. --

Please add the attached sequence listing (pages 1-2) at the end of the application.

IN THE SPECIFICATION:

Applicants respectfully request entry of the drawings changes noted in the Request for Approval of Drawing Change, filed herewith.

REMARKS

In the Office Action dated December 14, 2001, the time period for response to which was restarted on February 1, 2002, the Examiner noted that the numbering of claims was not in accordance with 37 C.F.R. § 1.126. Specifically, claim 11 appeared twice. Applicants agree with the Examiner's renumbering, and all references to claim numbers will refer to the claims as renumbered by the Examiner.

The Office Action further included a Notice Of Draftsperson's Review of the Drawings, objection to the margin on Figure 1. The Examiner required that the corrections to the drawings be made within the time period set for response to this Office Action. In response, applicants submit herewith a request for approval of drawing change to remove the objections made to Figure 1.

The Office Action has indicated that this application fails to satisfy the requirements of 37 C.F.R. §§1.821 - 1.825. Attached hereto is a sequence listing in accordance with 37 C.F.R.

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§§1.821 - 1.825. Applicants submit that this application now satisfies all of the relevant rules for applications that recite nucleotide and/or amino acid sequences.

In the Office Action, the Examiner has required restriction between the following groups of claims: Group I, claims 1-10, characterized as method claims for creating high-dimensional vectors by blocks or domains; Group II, claims 11-13, characterized as method claims for creating high-dimensional vectors by surface characterization; and Group III, claims 14-22 characterized as method claims for creating high-dimensional vectors by comparing biopolymer information. Applicants respectfully traverse the restriction requirement. However, to be fully responsive to the restriction requirement, applicants elect, with traverse, the invention of Group III, claims 14-22.

Applicants respectfully traverse this rejection for at least the reason that the Examiner has not provided any explanation nor cited any evidence in support of the conclusion that the Groups represent distinct inventions. In order to show that inventions are distinct, the Examiner must show that the inventions have either a separate classification, a different field of search or a separate status in the art when classifiable together. See M.P.E.P. § 808.02. In this case, the Examiner has admitted that the inventions "are classified within the same class and subclass." Furthermore, the Examiner has not asserted that the Groups require a different field of search. Finally, applicants respectfully submit that the Examiner's conclusions that "each invention contains divergent subject matter" is unsupported by any evidence or explanation. Accordingly, applicants respectfully submit that the Restriction Requirement is improper.

In the Office Action, the Examiner also states that the application contains claims directed to patentably distinct species of the claimed invention, characterized by the Examiner as Species A, claims 5, 9, 12 and 18 characterized as directed to biopolymer material composed of

protein; Species B, claims 6, 10, 13 and 19 characterized as directed to biopolymer material composed of nucleic acid; and Species C, claim 8 characterized as directed to other biopolymer materials described via motif domains. In addition, the Examiner has characterized claims 1-4, 7, 11, and 14-17 as being generic. Applicants respectfully traverse this election requirement. However, to be fully responsive to the election requirement, applicants elect, with traverse, to prosecute of Species B, claims 6, 10, 13, and 19.

Applicants refer the Examiner to M.P.E.P. § 803, which sets forth the criteria and guidelines for examiners to follow in making proper requirements for restriction. The M.P.E.P. instructs the Examiner as follows:

If the search and examination of an entire application can be made without **serious burden**, the Office **must** examine it on the merits, even though it includes claims to independent or distinct inventions. M.P.E.P. § 803 (emphasis added).

Here, the Examiner has not demonstrated that examining Species A, B, and C together will constitute a serious burden, despite the assertion that they are distinct. Applicants respectfully submit that a search of Species A, B, and C would not be burdensome, as the Examiner has admitted that all of the claims depend from a generic independent claim. Thus, the search and examination of each generic independent claim should encompass the necessary search and examination for each identified Species. Applicants respectfully submit that the election requirement is in error, and request that the requirement be withdrawn.

In view of the foregoing remarks, applicants respectfully submit that both the restriction requirement and the election requirement are in error and request that the requirements be withdrawn.

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Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: May 1, 2002

By: Richard V. Burgujian Reg. # 24,014
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APPENDIX TO AMENDMENT OF APRIL 30, 2002

Version with Markings to Show Changes

AMENDMENTS TO THE SPECIFICATION

Page 2, delete the fourth paragraph and substitute the following paragraph:

--U.S. Patent Application Ser. No. [_____] 09/408,716, entitled "METHODS AND APPARATUS FOR DISPLAYING DISPARATE TYPES OF INFORMATION USING AN INTERACTIVE SURFACE MAP," filed on the same date herewith by Jeffrey Saffer, et al.; and

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Page 2, delete the fifth paragraph and substitute the following paragraph:

--U.S. Patent Application Ser. No. [_____] 09/410,367, entitled "DATA PROCESSING, ANALYSIS, AND VISUALIZATION SYSTEM FOR USE WITH DISPARATE DATA TYPES," filed on the same date herewith by Jeffrey Saffer, et al..

Page 3, delete the first paragraph and substitute the following paragraph:

-- DNA, RNA, and proteins represent key functional units in biological systems. DNA is composed of nucleotide subunits (deoxyadenosine, deoxythymidine, deoxycytidine, and deoxyguanosine) linked together to form an array of biopolymer material. Often, the linked chain is bound to a complementary chain to form a double helix. The code contained within the DNA is of multiple types. Some sequences within the DNA are recognized by regulatory factors and control how the biopolymer information is expressed. Some sequences encode structural attributes that contribute to the overall use of the biopolymer material. And some sequences encode the RNA or proteins that carry out functions within the cell. For simplicity, DNA is

usually represented as an ordered string of the deoxynucleotides (e.g., GATTCTAGGA, (SEQ ID NO:1)), but that simple string reflects the full function of the molecule. The RNA copy of the DNA is also a chain of nucleotides (adenosine, uridine, cytidine, and guanosine being the major ones) (e.g., AUGGACCAUA (SEQ ID NO:2)). Some RNAs are translated into proteins, which are strings of amino acid building blocks. --

Page 3, delete the second paragraph and substitute with the following paragraph:

-- There are 20 principal amino acid building blocks, and proteins are often represented simply by an ordered string of sequence letters (e.g., MRKLAGQPS (SEQ ID NO:3)). The function of proteins is not, however, fully contained within this simple string, since the building blocks can be modified in multiple ways within a cell. Nonetheless, the sequence of the amino acids is the primary contributor to the function of the protein. --